# MAYOR AND COUNCIL AGENDA

NO. 1 DEPT.: Community Planning and Development Services          DATE PREPARED: 9/21/05
     STAFF CONTACT: Edward J. Duffy, Community Dev. Program Mgr. FOR MEETING OF: 9/27/05

**SUBJECT:** Briefing And Discussion Regarding Town Square Parking District and Proposed Parking Rates and Revenue Control Systems For Town Square Parking Facilities.

**RECOMMENDATION:** Provide staff with suggestions to be used in evaluating revenue control systems for Town Square public parking facilities and guidance with respect to proposed parking rates and free parking policies.

**DISCUSSION:** Three public parking garages containing 973 public parking spaces are currently under construction in the Town Square development. These spaces are to be operated through a Rockville Parking District for the purpose of meeting the parking needs for the non-residential component of Town Square development including the Rockville Regional Library and the Cultural Arts Building. Since the completion of Town Square will be in phases, the parking facilities are also proposed to become available in stages. It is currently anticipated that three hundred forty-six (346) spaces in two garages, Block 1-2 and Block 5 are to be operational in the early Fall of 2006. The remaining six hundred twenty seven spaces (627) contained in the Block 4 garage at the corner of Beall Avenue and Hungerford Drive are anticipated to be open between November 2006 and Spring 2007 depending upon the retail opening schedule. There will also be forty-three (43) metered on-street parking spaces, the revenue from which will also be added to garage parking revenue.

On November 14, 2003, the Mayor and Council conducted a public hearing to consider the creation of a Public Parking Lot District in the Town Center. The district boundaries under consideration at that time included most of the Town Center Planning Area between the intersection of North Washington Street and Hungerford Drive on the north to Maryland Avenue on the south. After consideration of concerns raised by Town Center property owners at the public hearing and an evaluation of alternative courses of action presented by staff, the Mayor and Council, in May 2004, created a Town Center Parking District, the boundaries of which include only the properties in the block known as Town Square which is currently under redevelopment by RD Rockville, the Cultural Arts building, and the Rockville Regional Library.

Parking for the residential component of Town Square is to be provided in the same structures as the Parking District spaces. Those spaces are to be owned by the residential condominium units and the individual condominium owners. They will be separate from the public spaces and will be operated and maintained independently from the public spaces.

While considering the financing of the parking district garages, the Mayor and Council, in February 2004, conducted a worksession to discuss the gap between the costs of building, maintaining, and operating the parking garages and the revenue that would be generated through the operation of the

garages. Because many of the numbers used in the analysis at that time were hypothetical, staff was requested to revisit the issue after better numbers were available.

The City issued $5,000,000 in bonds in 2004 to cover some of the Town Square development costs, including parking costs. Recently, the City sold an additional $29.7 million dollars in bonds for the remaining parking construction costs in Town Center. The attached Pro Forma (Attachment I) which was utilized in the prospectus for selling the bonds indicates a revenue gap ranging from half a million dollars to $750,000 per year. Garage revenue in that pro forma is based upon charging for the use of the parking garages not only during the workday, but also on evenings and weekends.

The revenue projections are based upon information provided by Walker Parking that assume a parking rate of $1.00 for the first hour, $1.00 for each additional hour with a daily maximum charge of $8.00. Evening and weekend rates were proposed at $1.00 flat fee. They also include parking meter revenue and fines received from parking meters throughout the City.

**Options To Be Considered:** Inasmuch as paid parking is an important part of the parking district operation, solicitations are now being made for parking "revenue control devices" which will be used as a basis of collecting parking fees. (See attachments 2-7 for additional information.) Among the abilities requested for the revenue control devices to be used in the garages are:

- Individual device for each space or an approved group space control
- Use of coins, credit or debit cards, pre pay devices, validation devices
- Programmed for maximum time allowed
- Programmed automatically to reflect time and rate changes
- Resets automatically when vehicle leaves space
- Ease of collection/enforcement by revenue control officers
- Ability to monitor parking availability (separate system may be used to accommodate this feature)

In addition to the parking revenue control system, solicitations are also being made for a Parking Availability and Guidance System which is to provide:

- LED Readers at each entrance indicating the number of spaces available within the garage. (Exterior building mounted boards easily identified by approaching vehicles will also be considered.)
- Additional reader boards located inside the drive aisles advising customers of available spaces.

When submitting proposals, vendors are encouraged to submit alternate suggestions or features that would accommodate parking validation. They are also encouraged to:

- Submit additional features to allow revenue control officers to determine expired parking spaces for revenue enforcement.
- Remote reader boards are encouraged to provide wireless communication between garages and between remote locations.
- Provide for remote offsite parking availability boards.

- Automatic pay stations utilizing parking tickets and individual pay stations in lieu of individual devices will be considered if they can meet all previously described conditions.

**Fiscal Impact:** There is a projected revenue gap that ranges between $500,000 to $750,000 per year between the operating and debt service costs of the parking facilities and the projected operating revenue form all sources. When projecting garage operations revenue, no consideration was made for providing free parking for any of the Town Square occupants or events. As has previously been indicated, revenue projections are based upon charging for parking on weekdays from 7:00 A.M. to 7:00 P.M. and for utilization of a flat rate during evenings and weekends. It is currently proposed that the rates be:

Weekday rates - $1.00 first hour, $1.00 for each additional hour, $8.00 maximum daily rate.

Evening rate = $1.00 flat fee after 7:00 P.M.

Weekend rate = $1.00 flat fee

On-street meters to be collected 7 days a week from 8:00 A.M. to 10:00 P.M.

These rates are only proposed and are subject to modification. They do not have to be formally established until a Parking District budget is approved for Fiscal Year 2007. In establishing the rates, a number of considerations must be made. There is already a considerable projected gap between garage revenue and costs including debt service.

**Next Steps:** Prior to the preparation of a garage budget, a number of steps must be taken. These include:
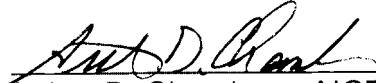
- Decision about the type of features the revenue control equipment to be installed in the parking garages should provide.

- .Preparation of a Request For Proposals (RFP) for the operation of the Parking District. That RFP should contain not only the basic specifications for operating the parking facilities but also contain the responsibilities of both the operator and the City, including parameters for dealing with issues such as requests for providing special operating hours, etc.

- After quotes are received for the parking equipment, additional direction will be sought from the Mayor and Council so that additional analysis of parking revenue controls can be performed. A revised pro forma should then be available for the Mayor and Council discussion and review and final decision in January 2006.

**PREPARED BY:**

_(signature)_

Edward J. Duffy, Community Development Program Manager

**APPROVED BY:**

_(signature)_          9/21/05

Arthur D. Chambers, AICP, Director       DATE
Community Planning and Development Services

**APPROVED BY:**

_____        _____

Scott Ullery, City Manager             DATE

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**LIST OF ATTACHMENTS:**

1. Revenue Gap Pro Forma

Examples of Revenue Control Devices

2. Merchant Valuator
3. Pay in Lane Device
4. Parking Voucher
5. Automatic Pay Station
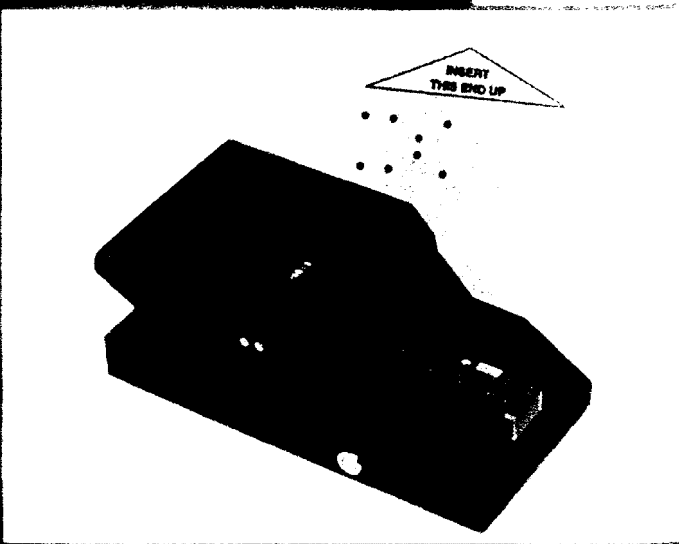6. Intelligent Meters
7. Central management Solutions

Rockville Town Center Parking Pro Forma
ALTERNATIVE B - Meter revenues as adjusted by Gavin - Debt Service with Capitalized Interest
8/17/2005 - Net Debt Service for the Capitalized interest scenario through June 1, 2006

| Fiscal Year | | | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 201 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calendar Year | | | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
| **OPERATING REVENUES** | | | | | | | | | | | | |
| Demand Generator: | User Group: | | | | | | | | | | | |
| Block 5 (122 Public Spaces) | Transient | | 100,800 | 124,800 | 129,600 | 136,800 | 140,900 | 145,100 | 149,500 | 154,000 | 158,600 | 163,400 |
| | Monthly | | 16,700 | 16,700 | 16,700 | 17,200 | 17,700 | 18,200 | 18,700 | 19,300 | 19,900 | 20,500 |
| | Sub Total | 100% | 117,500 | 141,500 | 146,300 | 154,000 | 158,600 | 163,300 | 168,200 | 173,300 | 178,500 | 183,900 |
| Block 1-2 Garage (225 Public Spaces) | Transient | | 186,000 | 241,000 | 238,800 | 252,000 | 259,600 | 267,000 | 275,400 | 283,700 | 292,200 | 301,000 |
| | Monthly | | 30,800 | 30,800 | 30,800 | 31,700 | 32,600 | 33,600 | 34,600 | 35,600 | 36,700 | 37,800 |
| | Sub Total | 100% | 216,800 | 271,800 | 269,600 | 283,700 | 292,200 | 300,600 | 310,000 | 319,300 | 328,900 | 338,800 |
| Block 4 Garage (630 Public Spaces) | Transient | | 161,200 | 669,600 | 706,800 | 744,000 | 766,300 | 789,300 | 813,000 | 837,400 | 862,500 | 888,400 |
| | Monthly | | 28,800 | 86,400 | 86,400 | 89,000 | 91,700 | 94,500 | 97,300 | 100,200 | 103,200 | 106,300 |
| | Sub-Total | 100% | 190,000 | 756,000 | 793,200 | 833,000 | 858,000 | 883,800 | 910,300 | 937,600 | 965,700 | 994,700 |
| Total Operating Revenues | | | 524,300 | 1,169,300 | 1,209,100 | 1,270,700 | 1,308,800 | 1,347,700 | 1,388,500 | 1,430,200 | 1,473,100 | 1,517,400 |
| Parking System: | | | | | | | | | | | | |
| On-Street Meter Revenue | | | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 |
| On-Street Meter Violation Revenue (all) | | | 230,000 | 230,000 | 230,000 | 230,000 | 230,000 | 230,000 | 230,000 | 230,000 | 230,000 | 230,000 |
| Off-Street Meter Violation Revenue (all) | | | 71,000 | 115,000 | 118,000 | 122,000 | 123,000 | 127,000 | 130,000 | 133,000 | 136,000 | 139,000 |
| | Sub-Total | 100% | 631,000 | 675,000 | 678,000 | 682,000 | 685,000 | 687,000 | 690,000 | 693,000 | 696,000 | 699,000 |
| Other Revenue: | | | | | | | | | | | | |
| Parking District Contribution | | | 433,000 | 433,000 | 433,000 | 433,000 | 433,000 | 433,000 | 433,000 | 433,000 | 433,000 | 433,000 |
| Total Gross Parking Revenues | | | 1,588,300 | 2,277,300 | 2,320,100 | 2,385,700 | 2,426,800 | 2,467,700 | 2,511,500 | 2,556,200 | 2,602,100 | 2,649,400 |
| **OPERATING EXPENSES** | | | | | | | | | | | | |
| Total Structure Operating Expenses | | | (334,800) | (559,000) | (576,200) | (594,600) | (612,800) | (631,300) | (650,400) | (670,000) | (690,000) | (710,500) |
| Total Meter System Expenses | | 100% | (280,000) | (288,400) | (297,100) | (306,000) | (315,200) | (324,700) | (334,400) | (344,400) | (354,700) | (365,300) |
| Net Operating Expenses | | 100% | (614,800) | (847,400) | (873,300) | (900,600) | (928,000) | (956,000) | (984,800) | (1,014,400) | (1,044,700) | (1,075,800) |
| Net Operating Income | | | 973,500 | 1,429,900 | 1,446,800 | 1,485,100 | 1,498,800 | 1,511,700 | 1,526,700 | 1,541,800 | 1,557,400 | 1,573,600 |
| **DEBT SERVICE** | | | | | | | | | | | | |
| 2004 G.O. Bonds - Actual Parking DS | | | (345,803) | (345,603) | (340,203) | (339,803) | (339,203) | (338,403) | (342,403) | (341,003) | (339,403) | (342,390) |
| 2005 G.O. Bonds - Estimated Parking DS | With CAPI | | (1,818,375) | (1,816,375) | (1,823,375) | (1,823,875) | (1,823,125) | (1,826,125) | (1,817,625) | (1,823,125) | (1,821,875) | (1,819,125) |
| Total Debt Service | | | (2,164,178) | (2,161,978) | (2,163,578) | (2,163,678) | (2,162,328) | (2,164,528) | (2,160,028) | (2,164,128) | (2,161,278) | (2,161,515) |
| Net Total Profit/Shortfall | | | (1,190,678) | (732,078) | (716,778) | (678,578) | (663,528) | (652,828) | (633,328) | (622,328) | (603,878) | (587,915) |
| Debt Coverage Ratio | | | (0.45) | (0.66) | (0.67) | (0.69) | (0.69) | (0.70) | (0.71) | (0.71) | (0.72) | (0.73) |
| Projected Revenue Gap | | | (1,190,678) | (732,078) | (716,778) | (678,578) | (663,528) | (652,828) | (633,328) | (622,328) | (603,878) | (587,915) |
| Cumulative Gap (Surplus) | | | (1,190,678) | (1,922,755) | (2,639,533) | (3,318,110) | (3,981,638) | (4,634,465) | (5,267,793) | (5,890,120) | (6,493,998) | (7,081,913) |

(1)

**Features:**

- Manually operated device provides time, fee and/or percentage discounts

- 624 merchant accounts available

- Up to 4 validations per ticket

- Reliable service for long periods of time without any special maintenance

- Durable metal housing with stainless steel pins

- Ink stamp assembly with 3 pre-inked stamp modules

- Hole pattern provides encrypted code

*Simple to use parking validation*

## Simple Validation

The SST Merchant Validator is an off-line, non-powered device that allows parking facilities to offer time, fee and/or percentage discounts for up to 624 merchant accounts.

To validate a ticket, the store attendant simply inserts the SST ticket into the mechanism and manually depresses the handle, which encodes the merchant information onto the ticket for the predetermined discount.

When the validated ticket is fed into an SST Ticket Validator or Automatic Pay Station, the SST Transport reads the ticket and sends the discount data to the Auditor PowerPad Fee Computer. The Auditor PowerPad then processes the merchant and fee discount information, eliminating the need to manually enter the information.

## Validated Ticket

The mechanical, hand operated device is designed to punch a coded series of machine-readable holes through an SST ticket with steel pins located inside the device in a 4x4 matrix. Each Merchant Validator has a hole pattern (some used, some not) configured for the merchant and parking fee discount.

In addition to these holes, the mechanism also applies a man-readable three-digit ink stamp to the ticket. The hole pattern and the ink stamp both correspond to a three-digit number, which uniquely identifies the unit.

## Multiple Validations

Each ticket is capable of accepting as many as four different validations in what are called validation "zones." Each Merchant Validator is capable of applying a single validation to any one of four zones per ticket.

## Versatile Uses

There are many conceivable scenarios in which the Merchant Validator could be used, such as shopping malls with controlled parking, downtown retailers, universities, hospitals, and more.

As a patron makes a purchase, the cashier takes the ticket, inserts it into the Merchant Validator, advances it to the next available validation zone and punches the code into the ticket while imprinting the ticket with an ink stamp. This provides the ability of any merchant to offer a unique incentive to patrons for discounted parking.

The patron can collect as many as four validations per ticket. At the exit or point of payment, the patron's ticket with the validations is read by an SST/HP-1 or HP-4 Transport. The validation data is read and sent to a processing terminal where the validations are interpreted and applied to the parking fee.

## FEDERAL APD
Federal Signal Corporation

1. Purpose

The Federal APD SST Merchant Validator shall be a non-powered, hand-operated device that punches a coded series of holes into a parking ticket in a pattern that corresponds to a merchant account. At the same time, the Merchant Validator stamps a number on the parking ticket that corresponds to the hole pattern. The hole pattern shall be read by the Federal APD SST/HP-1 or HP-4 Transport, which sends the information to the Auditor PowerPad Fee Computer, which processes merchant parking fee discount information.

2. Features.

   a. The Merchant Validator shall punch the coded series of holes and print the ink stamp on the parking ticket when the Merchant Validator handle is pressed.

   b. The Merchant Validator shall have four positions, allowing it to place a validation at four different locations on the parking ticket.

   c. The Merchant Validator shall accommodate 999 possible merchant accounts.

   d. The ink stamper shall print a three digit number on the parking ticket, corresponding to the hole pattern.

   e. The Merchant Validator shall have a five digit non-resettable transaction counter that advances by 1 digit with each validation transaction. When the counter reaches 99999, the next transaction shall begin at 00000

   f. The base of the Merchant Validator shall hold the paper punched out of the tickets and have an opening where the paper can be emptied from.

3. Dimensions.

   a. The Merchant Validator shall be 4.45 inches W x 3.38 inches H x 8.00 inches D (113 mm W x 85.9 mm H x 203.2 mm D)

4. Construction.

   a. The Merchant Validator base and handle shall be constructed of anodized aluminum.

   b. The Merchant Validator shall have between one and 16 stainless steel pins in a 4 x 4 matrix, the number and placement of pins corresponding to the code established for the merchant account.

   c. The Merchant Validator ink stamper shall be constructed of a pre-inked sponge capable of several thousand impressions.

   d. The Merchant Validator ink stamper shall be capable of being re-inked and easily accessible for re-inking and inspection.

   e. The Merchant Validator shall have four rubber feet on the base plate.

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# Pay-In-Lane Device

## Operate Your Parking Facility Without An Attendant

**PAY HERE**

**Attachment #3**

### Features:

* On-line or off-line operation
* Self-replenishing coin system

### Flexible Payment Methods:

* Coin or Paper Currency
* Debit Card
* Credit Card
* Merchant Validation
* Vouchers
* Value Cards
* Receipt issued on demand

### Options:

* Journal Printer
* Intercom

*The Pay-In-Lane device* offers you a convenient way to operate your parking facility without an attendant. Each model is unmanned and provides Exit Cashiering or Pre-Pay entry. At exit, the Pay-In-Lane processes the fee automatically and displays it on the LCD window. Many payment options are available with easy to find graphics. Change is issued in coins and a receipt is either provided on demand or can be programed to issue automatically

### Exit Operations:

#### Model 9000S - Standard Unit

This model is an unmanned Exit Cashiering device. User-friendly features prompt patron to insert their parking ticket into the device. When the fee is displayed your customer can choose their method of payment. Standard payment features for the Model 9000S include paper currency, coins, vouchers, merchant validations, or debit ValueCards.

#### Model 9000C - Credit Card Unit

This model includes all the payment options that the Model 9000S has and can also process Credit Cards.

### Entry Operations.

#### Model 9000P - Pre-Pay Unit

This model is used for point of entry operation. When a patron drives up to the Model 9000P the required fee is displayed. The parking fee is a programmable flat rate. Payment can be made with paper currency, coins or credit card.

④

## 1. Purpose:

The Pay-In-Lane models are unmanned devices that provide complete automation of cashiering services to parking patrons at the lane. The Model 9000S and Model 9000C are exit devices that read magnetic stripe tickets, ValueCards, vouchers and hole punch validations. The Model 9000C also reads credit cards. The Prepay Entry Device, Model 9000P processes credit cards as well as coin and paper currency as the method of payment.

## 2. Features:

a. Automatically calculates and displays parking fees, accepts payment, issues change in coins or credit slips and provides A receipt automatically or on demand.

b. Incorporated the following standard components:
1. SST Ticket Validator (Model 9000S and 9000C)
2. Coin Changer (accepts and dispenses Coins)
3. Up to five Auto-Replenishing coin denomination dispenser tubes
4. Note Acceptor and vault
5. Programming Interface
6. Receipt Printer
7. Credit Card (on Model 9000C and 9000P)

c. The following components are optional:
1. Journal Printer
2. Intercom

d. Comprehensive financial and statistical reports are available at the device or from a PC running the Federal APD ScanNet Central Parking Management System.

e. Processes up to 14 different bank notes And up to 5 different coin denominations.

f. Operates independently offline, or online with Federal APD ScanNet Central Parking Management System.

g. LCD display guides the user through all transactions.

## 3. Mechanical:

a. The standard Model 9000S and the Credit Card Model 9000C reads magnetic stripe parking tickets, ValueCards and hole punch validations using Federal APD SST Transport mechanism.

b. All the Pay-In-Lane devices allow patrons to terminate the cashiering transactions at any time prior to completing a transaction.

c. The bank Note Acceptor accepts up to 14 different bank note denominations and includes the Bank Note Vault. The device screens all currency for validity, recognizes its value, and transports the notes to the vault. Any errors, warnings and shutdown notices are sent to the Journal Printer (if present) and at the display on the programming interface. The Note Vault has a capacity to store up to 600 bank notes.

d. The Coin Changer combines traditional coin acceptance and changer functionality along with tracking and diagnostic abilities. The Coin Changer manages coin inventory, optimizes payout, and is easy to learn and use. It comes with five replenishing interchangeable change tubes. When coins are added to the Coin Changer it automatically displays on the LCD panel how many coins are added. This unit determines whether to send coins to the Dispenser or the Vault. The Coin Dispenser pays out approximately three coins per second, depending on the coin dimensions, and processes up to five different types of coins. It handles coins between the Diameter range of 15.70 mm to 28.5 mm and thickness range of 1.10 mm to 2.50 mm.

e. The Programming Interface provides the tool for programming hardware and software features of the Pay-In-Lane device, such as fee calculations, attendants, taxes, time and date. Reports can be printed from the Pay-In-Lane location, displayed on the Programming Interface terminal or sent to ScanNet Central Parking Management System software if Online.

## Pay-In-Lane Device

### Operate Your Parking Facility Without An Attendant



PAY HERE

f. The Credit Card Reader is a single track swipe magnetic card reader. This card reader has a RS-232 signal interface and waterproof structure. The recording capacity is a 79 character maximum on Track 1 (6 bit + 1 parity) and 40 character maximum on Track 2 (4 bit + 1 parity).
The Credit Card Reader is mounted horizontally in the Pay-In-Lane device.

g. The thermal receipt printer produces receipts of payment and prints them automatically or on Demand. The printer prints financial and statistical reports upon request.

h. The Pay-In-Lane models offer an optional journal printer, which provides a record of all transactions and programming changes, as well as error messages, warnings and shutdown notices from various components in the Pay-In-Lane device. Operators can program whether the printer records all transactions or only exceptions (voids, no sale, log on and off, lost transactions, and clock updates).

i. Intercom is provided as an option.

## 4. Dimensions:

a. The Pay-In-Lane cabinet is 24.21 inches W x 24.21 inches H x 16.53 inches D (615 mm W x 615 mm H x 420 mm D).

b. The Pay-In-Lane pedestal base is 10 inches W x 25.5 inches H x 10 inches D (647.7 mm W x 790 mm H x 254 mm D).

## 5. Electrical:

a. The Pay-In-Lane is available in 115 VAC or 220 VAC power requirements. It also provides a 24 VDC and a 5 VDC Power supply for the cash handling system, the SST Ticket Validator and the Credit card reader.

## 6. Construction:

a. The Pay-In-Lane housing is a weatherproof steel cabinet mounted on a steel pedestal.

b. The cabinet is finished in powder coat paint in either Federal APD Safety Yellow or White for maximum visibility and safety. Other colors are available, when specified.

c. To discourage tampering, the Note Vault is constructed of metal and provides a secure storage area for bank notes. The Note Vault is locked into place, and an additional key is needed to unlock the vault.

d. Exterior operator controls are clearly laid out with easy-to-follow instructions, visual display and push button controls.

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# New Haven Parking Vouchers Just Make Sense!

## SAVE 20% with Parking Vouchers!

Whether you are parking all day or for just one hour, there is a parking voucher to suit your needs!
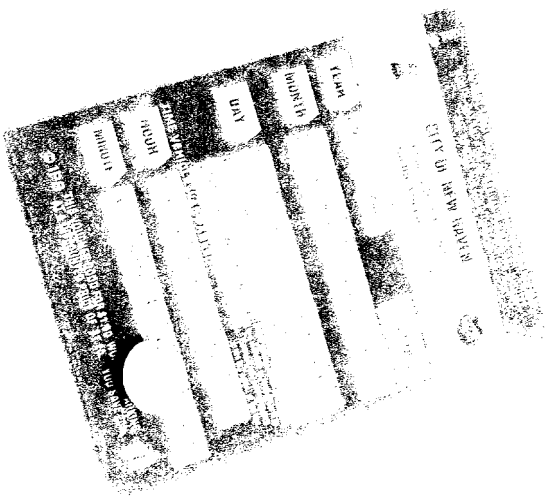
All day meter parking for only $2.50 or hourly meter parking for just $.60 per hour. Parking vouchers are 20% less expensive than meters per hour. Buy them at retail outlets located in New Haven. Street signs will direct you to the vendor nearest where you park, or call New Haven Traffic and Parking at (203) 946-8075.
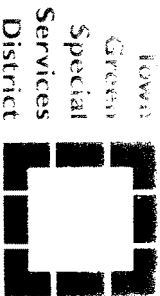
Town Green Special Services District
129 Church Street, Suite 709
New Haven, CT 06510  (203) 401-4245

## HOURS OF OPERATION: As posted

## CONDITIONS OF USE:
• All vouchers must be correctly validated

## TO VALIDATE:
• Scratch off the year, month, day and time (to the nearest 5 minutes)
• Only ONE box in each section may be removed
• failure to properly display your voucher shall be a violation.
• All vehicles are parked subject to the regulations and conditions of the New Haven Traffic Authority

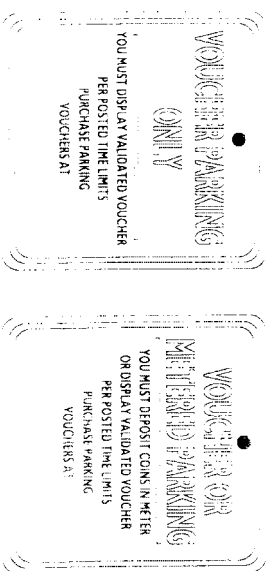## HOW TO DISPLAY YOUR VOUCHER

On arrival indicate year, month, day and time (to the nearest 5 minutes) by scratching off appropriate panels with a small coin or fingernail

Display the voucher like this inside your curb side window, facing out.
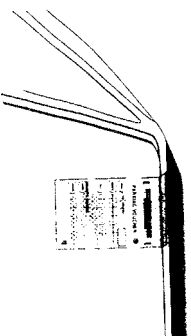
MAP FOR CONVENIENCE ONLY. PARKING ZONES MAY CHANGE FROM THOSE SHOWN ABOVE. IPS ASSUMES NO RESPONSIBILITY AS TO ACCURACY OR CHANGES IN THE ABOVE INFORMATION.

VOUCHER PARKING ONLY
YOU MUST DISPLAY VALIDATED VOUCHER
PER POSTED TIME LIMITS
PURCHASE PARKING VOUCHERS AT

VOUCHER OR METERED PARKING
YOU MUST DEPOSIT COINS IN METER OR DISPLAY VALIDATED VOUCHER
PER POSTED TIME LIMITS
PURCHASE PARKING VOUCHERS AT

Look for these signs to tell you where and how you can use Parking Vouchers.

## INTERNATIONAL PARKING SOLUTIONS USA
11 Sycamore Way, Branford, CT 06405
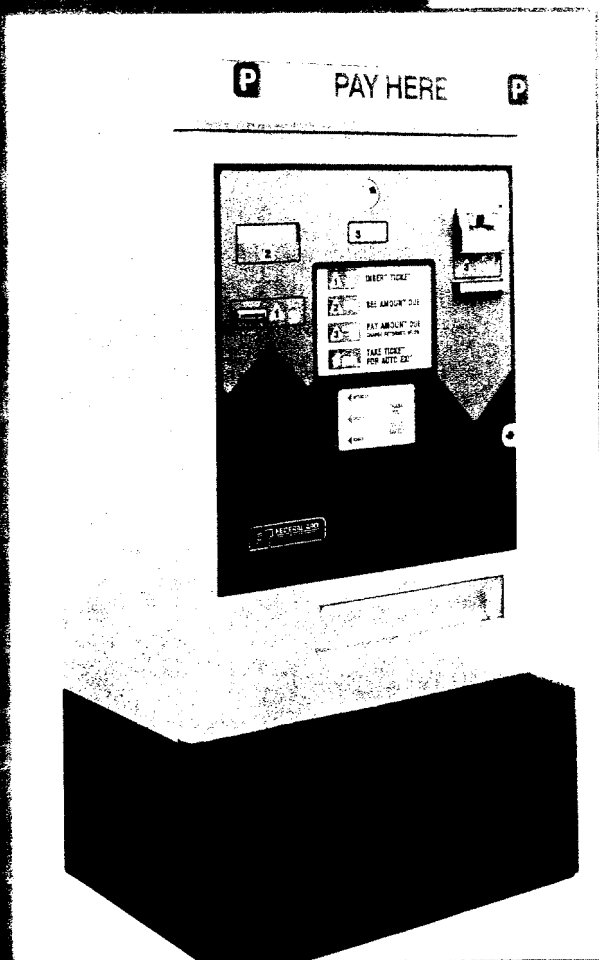Tel (203) 315-4830    Fax (203) 315-5071
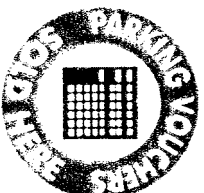
This sign in windows will tell you where Parking Vouchers are sold.

PARKING VOUCHERS HERE

TO DOWNTOWN NEW HAVEN

VOUCHER PARKING

(6)

# SST® Automatic Pay Station



P  PAY HERE  P

SST is a registered trademark of Federal APD, Inc.

## Features:

Robust cabinet with tamper-resistant access door secured with 3 point locking system
User-friendly operation
Flexible payment options:
• Coins • Paper currency
• Credit/debit card
Self-replenishing coin system
Process tickets and bank cards through single transport
Reliable bank note processing
Dual bank note dispenser units available
Modular components
Comprehensive cash audits and management reports



Automatic, 24 hour cashiering

### Automatic Cashiering

The SST Automatic Pay Station offers you an innovative ticket handling system for your central cashiering parking operation. This robust pay-on-foot station is designed to improve your cash management with ATM-type technology, lower your labor and operational expenses, and improve your customer service with around the clock, 24 hour operation.

### User-Friendly

Many user-friendly features are built into the pay station, including simple operations for customers, service personnel and management.

The ergonomic design of the pay station guides your customers through the entire transaction process. Clearly defined instructions are simple to follow.

Parking managers will appreciate how quickly employees can learn to use, service and program the pay station. Fast shift audits are made possible with smooth, pullout cash modules, and interchangeable SST components mean less maintenance and downtime.

Contemporary software packages streamline programming and reporting routines and automate your daily management procedures. All programming and reporting functions are easily accomplished with the on-board terminal or with a centralized SCAN System.

### Flexible Payment Options

The SST Automatic Pay Station offers you a wide range of payment options. Short term tickets, special parking passes and bank cards of all types may be processed through the single transport slot. The pay station accepts payment in coins, paper currency, parking pass, or bank card, and delivers change in either coins or paper currency, or both.

### Uncompromising Security

Your revenues are protected by a robust vault designed to withstand the harshest environments. The cabinet features a tamper-resistant access door secured with a rugged three-point locking system. All key components are guarded by separate locking devices and any unauthorized access triggers an alarm message.

Access to the payment systems (coin, bank note, bank card, etc.) requires an electronic password plus mechanical keys. Different keys are used for each cash module, and each module is monitored electronically for maximum security.

Comprehensive cash audits and facility management reports can be captured on-line or off-line to ensure 100% collection of all parking fees.
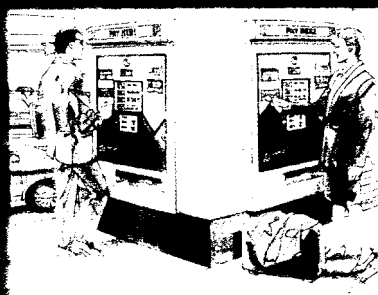
## FEDERAL APD

Federal Signal Corporation

1. Purpose

The SST Automatic Pay Station shall be an unmanned, pay-on-foot station that provides completely automated cashiering services to parking patrons. This central cashiering device shall read and encode magnetic stripe tickets with payment information when the appropriate payment has been made to satisfy the fee due.

2. Features/Functions

a. The SST Automatic Pay Station shall automatically calculate and display parking fees, accept payment, issue change, and provide a receipt (either automatically or on demand).

b. The SST Automatic Pay Station shall incorporate the following components as standard: (1) SST Ticket Validator, (2) Coin Acceptor, (3) Route Inhibit Mechanism, (4) Three Coin Dispenser Units, (5) Programming Terminal, (6) Receipt Printer.

c. The following components shall be available: (1) Bank Note Handling System (with Bank Note Acceptor, Bank Note Escrow Unit, and Bank Note Vault), (2) Dual Bank Note Dispenser Units, (3) a fourth Coin Dispenser, (4) Coin Vault, (5) Journal Printer, (6) Ticket Burster, (7) various software options.

d. The SST Automatic Pay Station shall provide comprehensive Financial and Statistical reports at the device, or at a central communications computer operating the Federal APD SCAN System.

e. The device shall operate off-line, or on-line with the Federal APD SCAN System.

f. The device shall provide an LCD message display to guide patrons through all transactions.

g. The SST Automatic Pay Station shall be UL and C-UL listed.

3. Dimensions

a. The SST Automatic Pay Station cabinet shall be 36 ½ inches W x 55 inches H x 25 ½ inches D (92 cm W x 140 cm H x 64 cm D). Width includes the "Pay Here" sign overhang.

b. Optional pedestal base (ADA compliant) shall be 36 ½ inches W x 11 inches H x 28 inches D (92 cm W x 28 cm H x 71 cm D).

c. Optional pedestal base shall be 36 ½ inches W x 16 inches H x 28 inches D (92 cm W x 41 cm H x 71 cm D)

4. Electrical

a. The SST Automatic Pay Station shall provide a universal power supply for 115 VAC or 220 VAC power requirements. It shall also provide a 24 VDC power supply and 36 VDC power supply for the cash handling system (if a Bank Note Dispenser is included).

5. Construction

a. The SST Automatic Pay Station shall provide a vandal-proof cabinet constructed of heavy gauge steel.

b. Maximum security shall be provided with an access door secured with a vandal resistant, three-point locking mechanism. Cash handling systems are guarded by double locking mechanisms. Electronic monitoring systems used throughout detect tampering.

c. The cabinet shall be finished in a powder coat paint in either Federal APD Safety Yellow or Federal APD White (as specified) for maximum visibility and safety. Other colors shall be available when specified.

d. Exterior operator controls shall be clearly laid out with easy-to-follow instructions, visual display and push button controls.

e. The device shall provide an illuminated Pay Here sign and Change/Receipt tray for nighttime operation.

6. Mechanical

a. The SST Automatic Pay Station shall read and validate magnetic stripe parking tickets as well as produce receipts.

b. The device shall allow patrons to terminate the cashiering transaction at any time prior to completing a transaction.

c. The SST Automatic Pay Station shall provide an SST Transport Mechanism that contains two magnetic read/write heads, and a self-aligning thermal printer.

d. The SST Automatic Pay Station shall include a Coin Processing System that consists of the Coin Acceptor device, Coin Dispenser units, and an optional Coin Vault.

e. The Coin Acceptor shall screen all coins or tokens of different values and sizes for validity. The device shall recognize the value of the coin, send the appropriate credit signal to the CPU, and route the coins to the appropriate Coin Dispenser or Coin Vault.

f. The universal Coin Dispenser shall be large capacity coin units that collect and/or dispense metal currency. The units may be programmable as either self-replenishing (coins stored in the dispenser), or so that coins are automatically sent to the Coin Vault.

g. The optional Coin Vault shall provide storage for accepted coins once they are routed from the Coin Acceptor.

h. The SST Automatic Pay Station shall include an optional Bank Note Handling System that consists of the Bank Note Acceptor, Bank Note Escrow unit, and the Bank Note Vault.

i. The Bank Note Acceptor shall accept up to 14 different bank note denominations (as programmed) in any of four ways of insertion. The device shall screen all currency for validity, recognize its value, send the appropriate credit signal to the CPU, and transport the notes to the Bank Note Escrow unit.

j. The Bank Note Escrow unit shall temporarily store up to 14 bank notes so that they may be returned to the customer in event that a transaction is canceled.

k. The Bank Note Vault shall accept bank notes transported from the Bank Note Escrow unit. It shall stack the notes and provide a secure storage area for validated bank notes.

l. The Bank Note Dispenser shall provide bank notes as change to the patron when the transaction is completed. The device shall have the capacity of storing 1,650 - 2,150 bank notes (dependant on condition). Dual Bank Note Dispenser units shall be available when specified.
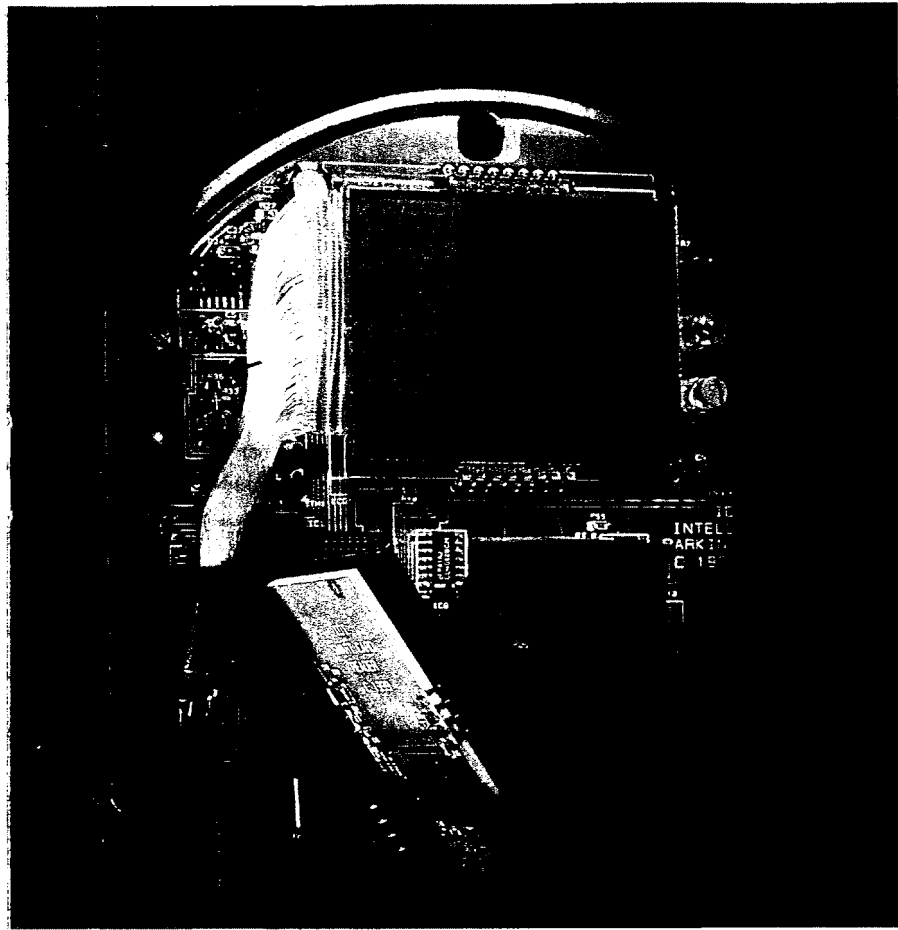
Distributed by:

ROUGH VEHICLE DETECTION,
IMETER OFFERS THE ABILITY TO
ARKING **SPACE** IN NEW WAYS

Know when a vehicle exits
a space. Reset the meter, recap-
turing paid, but unused, time.

Know where and when viola-
tions are occurring. Efficiently
deploy enforcement resources.

Know actual parking space
usage. Gather valuable data
for management and planning
purposes.

THROUGH VEHICLE DETECTION,
INTELLIMETER OFFERS THE ABILITY TO
USE PARKING **TIME** IN NEW WAYS

Know when a vehicle arrives.
Give a "grace period" of free
time for getting change or
running quick errands.

Know how long a meter has been
expired. End claims of "it just
expired," and institute graduated
fines, matching the fine to the
violation severity.

Know how long a specific
vehicle has been at a specific
meter. Easily implement
progressive rates, and deter
meter feeding.

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Rediscover Space and Time˙
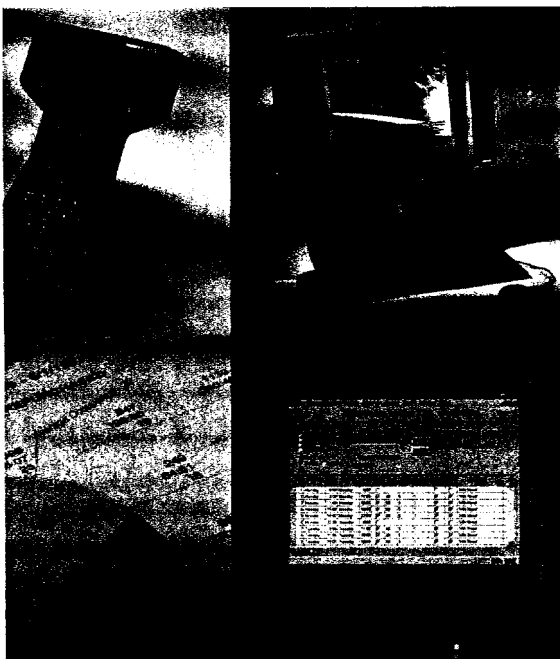
# Intelligent Meter Mechanism

IntelliMeter consists of an Intelligent Meter Mechanism, an optional Vehicle Detection Unit, Portable Data Terminals, MeterMaster™ software, and a Housing and Vault.

The Intelligent Meter Mechanism is a full-featured electronic parking meter with a useful life of 15 to 20 years. With no moving parts and a software-based design, maintenance is predominantly clearing of coin jams (which can be accomplished in less than 3 minutes, depending on the obstruction), replacement of batteries 1 to 2 times per year, and repair of vandalism damage.

## Environmental Factors

Operating temperature range is -40C/-40F to +60C/140F. The Mechanism is designed to withstand dirt, moisture, salt, vibration, and other weather conditions. The printed circuit board is sealed in a weatherproof coating.

## Mechanism Assembly

The Mechanism is designed to be lightweight, uses a minimum number of components, and is the world's only meter mechanism that can be disassembled or repaired *without the use of tools*. Its unique snap-together design assures fast and easy maintenance and long life.

## Internal Timekeeping

The Mechanism has a 365-day real-time clock with backup power supply. It has the capability to automatically adjust for daylight savings time without the need to program it in advance. Each communications session between a Mechanism and the Portable Data Terminal (PDT) includes an update of the Mechanism's real time clock with the PDT's current date and time to ensure the Mechanism clock is in synchronization.

## Power Supply

The Mechanism operates on four AA batteries that will power the unit for at least 1 year. Replacing batteries, as with all servicing, is done without the use of tools. Rate structure memory is retained during battery replacement. Advance indication of low battery is given by both symbols on the display and an amber

LED. In addition, a low battery report is available via MeterMaster. Battery strength is automatically downloaded to the PDT for creation of a maintenance report of Mechanisms in need of replacement batteries.

## Displays

### Front Display

- Time Display.

   The time display is an industrialized LCD containing at least four 7 segment characters ½" high by ¼" inch wide. The two left most characters indicate the purchased or remaining time in hours. The two right most characters indicate the purchased or remaining time in minutes. The hours and minutes are separated by a colon (:).

- Icons

   The icons are universal symbols used to convey a variety of <u>specific</u> messages (not merely Out of Order) to enforcement and maintenance personnel. Specific messages include:

   - No Parking
   - Invalid Coin
   - Invalid Card
   - Maximum Time Bought
   - Non-compliance (only with Vehicle Detection Unit (VDU) connected)
   - Coin Jam
   - Tampered (only with VDU)
   - Vehicle Detected (only with VDU)
   - Low Battery

### Backlight

The LCD features a backlight for nighttime operation and is programmable for activation at a predetermined time. The backlight illuminates when an arriving vehicle is detected and when a coin is inserted. This is allows the customer to verify any arrival grace period (when VDU is connected), view the rates, and verify purchased time. It also illuminates when additional time is purchased.

### Rear Display

The rear display is approximately 1¾" wide by ¾" high. The LCD flashes red and silver when the meter is in expired time and displays only silver when it is not.

<u>LED Display</u>

The Mechanism has a "traffic light" LED configuration of red, amber, and green on both front and rear sides. The LEDs are super bright and can be seen from at least 50 feet in the dark. The LEDs are programmable to convey a variety of meanings—flashing red for expired time, flashing amber for a variety of diagnostic and service alerts.

## Payment Mechanisms

<u>Coin and Token Acceptor</u>

- The coin and token acceptor uses state-of-the-art technology to reject slugs and other invalid coins or tokens, minimizing lost revenues. Up to eight different coins or tokens can be accepted.

- The patented coin validation technology is the most advanced in the world, and is used in 85% of gaming industry machines. It is an extremely low power, sophisticated validation device which takes a digital snap-shot of the coin and compares that to its library of valid coins for instant validation or rejection.

- An anti-stringing device prevents time being given for coins attached to removable devices (i.e., pieces of string).

- The coin path completely disassembles without the use of tools for easy clearing of jams. Common foreign objects can be cleared from the coin path within 3 minutes in various weather conditions.

<u>Card Reader</u>

- The Mechanism optionally includes a self-contained card reader which will not allow coins to pass through, and which can be cleared of jams in under 3 minutes.

- The reader is compatible with all ISO-7816 debit card payment systems and features a card wiper device to reduce or eliminate loose debris and moisture from the cards prior to insertion.

- The card reader plugs into the mechanism without tools, for ease of maintenance and replacement.

## Revenue Audit Data

The Mechanism records the value of coins, tokens and debit card revenue validated. Audit information is retrieved via the PDT for transfer to MeterMaster. Audit information is reset after successful transfer from the Mechanism to PDT. Audit information includes the number of invalid transactions (bad coins, cards). The memory is powerful enough to retain data for twelve (12) months without being overwritten.

## Additional Data Collection

The Mechanism (when connected with the VDU), accumulates parking activity information for transfer to MeterMaster for each defined data period as follows:

- Parked vehicle count, accumulated parked time, average parked time
- Paid vehicle count, accumulated paid time, average paid time
- Reset vehicle count, accumulated reset time, average reset time
- Empty space count, accumulated empty time, average empty time
- Expired meter count, accumulated expired time, average expired time
- Repurchased time count, accumulated repurchased time, average repurchased time
- Obstructed meter count, accumulated obstructed time, average obstructed time
- Meter feeding attempts

## Field Audit

The Mechanism can be field audited, with the revenue and activity information read and displayed on the PDT in a summary fashion, and optionally stored in the PDT for subsequent processing by MeterMaster. The field audit function will not reset revenue and activity information on the Mechanism.

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# Vehicle Detection Unit (VDU)

IntelliMeter consists of an Intelligent Meter Mechanism, an optional Vehicle Detection Unit, Portable Data Terminals, MeterMaster™ software, and Housing and Vault.

The VDU fits between the housing and the vault and interfaces with the Intelligent Meter Mechanism via a standard communications port. The VDU contains flat-face sensors which detect the presence of a vehicle.

The following performance features, all of which are programming options, are only available with the VDU connected to the Intelligent Meter Mechanism.

## Non-compliance

If a driver fails to insert payment as required, the meter will display the fact that the vehicle never paid.

## Total Time Expired

If a driver pays, but sensors detect the vehicle does not exit the space before paid-for time expires, the meter will track the length of time the vehicle remains in an expired state.

## Resetting

Time remaining when a vehicle departs can be removed from the Mechanism.

## Grace Periods

When the VDU detects a vehicle, it can automatically put a predetermined number of minutes on the Mechanism.

## Deterrence of Meter Feeding

Once a vehicle has purchased the maximum allowable time, additional time cannot be purchased until the vehicle exits the space.

## Progressive Rates

A vehicle can be charged more the longer it stays in a space.

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Rediscover Space and Time·

# Portable Data Terminal (PDT)

IntelliMeter consists of an Intelligent Meter Mechanism, an optional Vehicle Detection Unit, Portable Data Terminals, MeterMaster™ software, and Housing and Vault.

The PDT, which is a handheld computer, serves as the link between the Intelligent Meter Mechanism and Vehicle Detection Unit, and MeterMaster..

## Functions

The PDTs transfer:

- Operating Parameters established through MeterMaster
- Revenue Information collected by each Mechanism.
- Parking Statistics collected by each Mechanism (when VDU is connected).
- Maintenance Work required by each Mechanism.
- Maintenance Activities performed by field personnel.

## Communications

### Infrared Device

An infrared device built into the PDT reads data stored in the Mechanism for transfer to MeterMaster and transfers programming changes from MeterMaster to affected Mechanisms.

### Communications Range

The PDT will communicate with the mechanism at a distance of up to 8"/20cm and an angle of up to 45 degrees from the Mechanism's IR link.

### Communications Time

The average time of Mechanism programming and field revenue and activity audits does not exceed five (5) seconds. The average time of Data Collection is a function of the frequency of collection.

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# MeterMaster™

IntelliMeter consists of an Intelligent Meter Mechanism, an optional Vehicle Detection Unit (VDU), Portable Data Terminals (PDT), MeterMaster™ software, and Housing and Vault.

IntelliMeter is controlled through the MeterMaster software package. MeterMaster runs under Windows 9X and Windows NT, is client server oriented, and will support up to 10 simultaneous users. MeterMaster communicates with and programs the PDTs at 38,400 baud. MeterMaster maintains collections, inventory control and counting room statistics. All activity between MeterMaster and the PDT, and between the PDT and individual Mechanisms is recorded and time stamped for reporting purposes.

## Security

### Security Codes

All functions in MeterMaster and on the PDT are security coded, and only authorized personnel, with the proper password and security level, are able to exercise the functions corresponding to their level.

### Audit Trail

User IDs and passwords are encrypted. The PDT creates and maintains an audit trail of each transaction with a Mechanism. MeterMaster has the appropriate audit trail reporting capabilities.

### Communications Protocol

The communications protocol between Mechanisms, the PDT and MeterMaster is unique, and commonly sold items such as I/R remote controls, garage door openers and vehicle alarm devices cannot communicate or interfere.

## Mechanism Database

MeterMaster maintains a database of the installed meter plant using an unlimited geographical hierarchy, including:

- Individual Mechanism
- Blockface
- Area
- District
- Zone
- City

## Operating Parameters

### Standard Operating Parameters

Operating parameters for Mechanisms are programmed in MeterMaster, and then transferred to a PDT for transmittal to the Mechanisms. Programmable parameters include:

- Standard rate operation
- Time of day and day of week operations
- Prepayment during free time for time in the next enforced period
- No parking times
- Charge the current rate of time extending into the next rate period
- Overtime periods
- Require a minimum amount of time to be purchased
- Delay the start of paid parking time runoff

### Additional Operating Parameters

These operating parameters are available only when a VDU is being used.

- Grace periods, both arrival and expired
- Reset of unused time upon vehicle departure
- Enforcement of maximum time purchase
- Progressive rate structure

## Data Trail

For each entry in MeterMaster, the program can record and display:

- Date and time record created
- Serial Number of Mechanism
- Zone code and description
- Location description
- Collection route number and description

## Reporting

### Revenue Reports

- Revenue by location
- Revenue by zone
- Revenue by collection route
- Revenue by source

### Maintenance Reports

- Maintenance by Mechanism serial number
- Maintenance by location
- Maintenance activity

### Other Reports

- Audit activity
- Inventory activity
- Programming activity
- Uncollected Meters (since a user definable date)
- Cash Reconciliation (by collection route number)
- Vault Capacity
- Missed Meters
- Low Batteries

### Parking Activity Reports

The following reports are available only when data has been gathered through the use of the VDU.

- Parking Space Activity (for any geographical level)
- Meter Feeding Attempts
- Enforcement Opportunities
- Paid Time Recaptured

- Obstructed Meters
- Repurchased Time
- Purchased Time/Count vs. Occupied Time/Count
- Paid Time/Count vs. Unpaid Time/Count
- Occupancy Percentage

## Data Storage and Export

Parking transaction and revenue data collected from the Mechanisms is transferred to and stored by the central computer. The data can then be analyzed, queried, formatted into reports, audited, and downloaded into popular database and spreadsheet programs.

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# Housing and Vault

IntelliMeter consists of an Intelligent Meter Mechanism, an optional Vehicle Detection Unit (VDU), Portable Data Terminals (PDT), MeterMaster™ software, and Housing and Vault.

The housing and vault available with IntelliMeter are designed to offer the maximum protection from the elements, vandalism and theft attempts available. The Mechanism and VDU are also fit-compatible with most other commonly available 2-piece housings and vaults.

## Housing

The Mechanism is designed for maximum vandal resistance. The Dome has a lock which is unique to each meter. A powder coat finish lasts 4½ times longer than conventional paint methods.

## Vault and Locks

Fully machined recessed doors prevent prying and reduce vandalism. Vault accepts open cup and sealed container collection systems. Locks are rear loading to resist punching or pulling, and are high security for vandal resistance.

## Installation

The installation method provides protection against attempts to dislodge meters from poles.

20

# Central Management Solutions

## For Parking and Ground Transportation Systems

**NT**™

FastPay - Cash & Credit Card

FastPay

P     PAY HERE

WELCOME 11/09 08:03
PLEASE INSERT TICKET

← PARK

FEDERAL APD

◄ INTERCOM
◄ CANCEL
◄ RECEIPT

**P** City Center
Parking Garage **P**

LEVEL 1   FULL
LEVEL 2   113 SPACES
          714 SPACES
          1088 SPACES

FULL

PLEASE
TAKE

FAPD

Account Balance Report

FEDERAL APD
Federal Signal Corporation

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# ntegrated System

The new technology designed into ScanNet's architecture challenges traditional thinking for central management systems. Parking, access, and revenue controls are no longer separated in different modules – but are bundled together as one seamless enterprise system.

Information generated from all the devices in the system, from barrier gates to fee computers, is accessible by ScanNet's Event Control System (ECS).

# A ccess Control

The Access Control System (ACS) enables you to set up Credentials that will allow patrons and vehicles to enter and/or exit a facility. A Credential is an instrument, such as an access card or an AVI tag, that uniquely identifies the patron. When a Credential is set-up, the system automatically places the ID information in all associated Passport Plus, ValuePass, and ValueCard Readers (or other select, third party devices). The Access Control System allows you to associate the Credential with a patron and/or a vehicle – allowing you to assign each to an account for billing and tracking purposes.
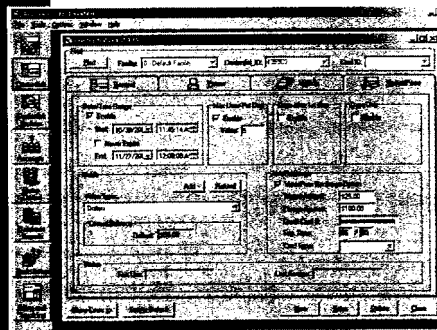
## Access Control



ScanNet Access Control utilizes a sample wizard to simplify set up and configuration.

## Credential Screens
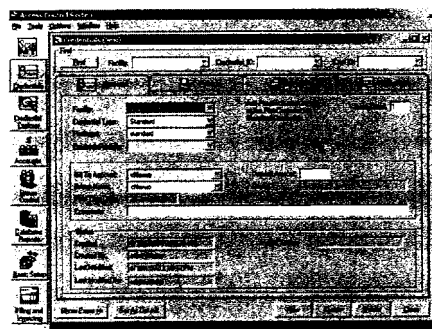


Credential Screens provide easy-to-use formats

## ValuePass Credentials



ValuePass, used in conjunction with Central Credit Card, allows you to use AutoRecharge to replenish a ValuePass Credential automatically.

## Group Counts Monitor



Group control in ScanNet Access allows you to create groups. You can set up credentials and establish limits for group occupancy. When using Billing and Invoicing, either flat or variable rates can be selected for over-limit uses.
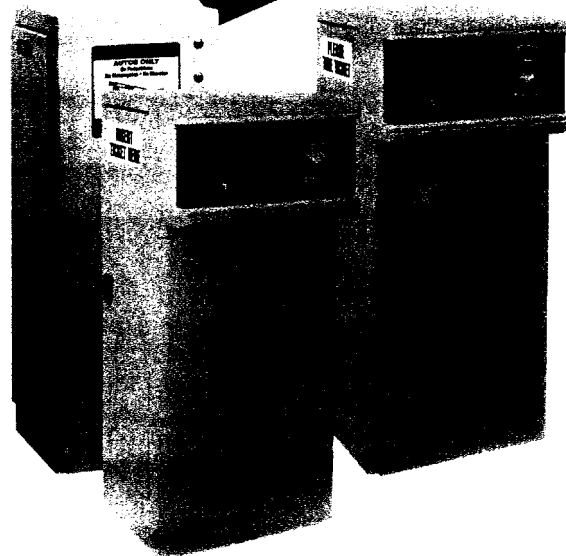
## Billing and Invoicing
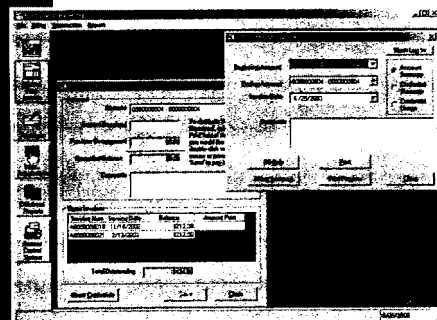


Billing and Invoicing provides a powerful tool to manage monthly patrons. Billing and Invoicing can be used with both standard and host-based readers.

## Credential Explorer
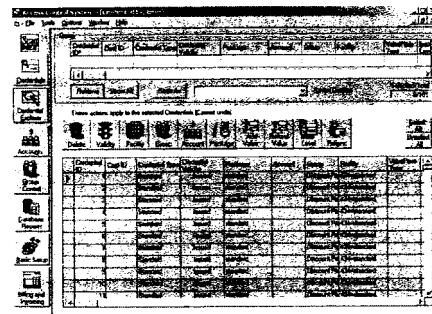


Credential Explorer allows you to create and save queries. It can easily perform maintenance based upon query results for commonly required operations.

4

# Parking & Count Control

ScanNet makes it easy to set-up and monitor all your traffic lane equipment. The Event Control System defines the variables for each lane controller in the system and controls the device's tasks – such as monitoring transient and monthly parkers, raising a gate arm, automatically triggering a full sign, or activating a variable message sign – while storing all the information in the database for real-time and statistical reporting.

Automated count control, integrated with automated revenue control, eliminates the need to manually read counters in lane equipment, and enables the owner/operator to control the parking of vehicles, not tickets!



Multiple site integration provides complete count information.



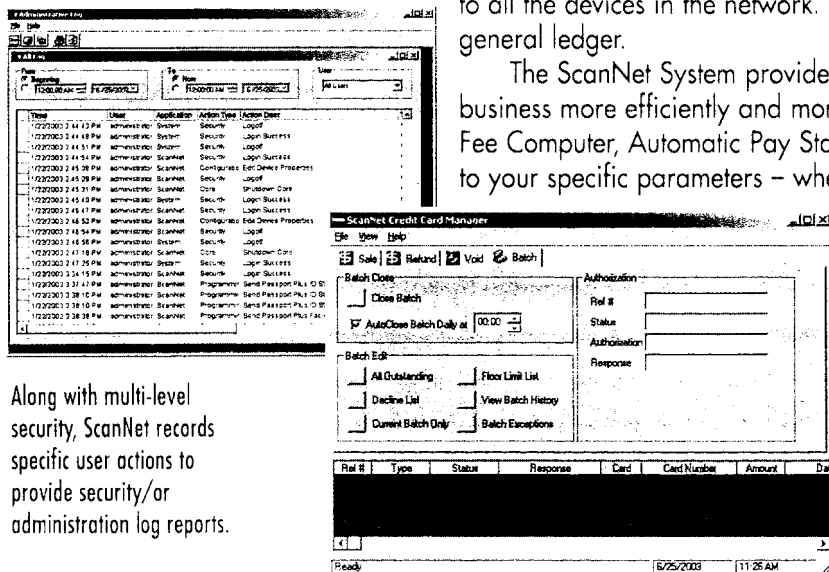Get a complete, up-to-the-minute look at any facility.

Real-time monitoring of lane activities.

# Revenue Control

ScanNet provides simple to use tools to manage your revenues from a central location. Pull down menus show remote programming and monitoring of transactions from your revenue control devices. Fee tables, rate structures, and other programming specifications can be designed and tested on the ScanNet host computer and then batch loaded to all the devices in the network. Point-of-sale revenues can be integrated with the general ledger.

The ScanNet System provides a powerful information center to manage your business more efficiently and more profitably. All the features of the Auditor PowerPad Fee Computer, Automatic Pay Stations, and Credit Xpress readers can be customized to your specific parameters – whether you are in the office next door, across the country, or anywhere in the world.

ScanNet provides a complete accounting of all the activities generated by revenue control devices. The core system provides many detailed transaction reports that may be integrated with third-party accounting systems. Crystal Reports Writer allows you to change, modify, and customize standard reports. Information can be exported to a number of different programs, including Microsoft Office, Lotus Notes, WordPerfect, QuickBooks, and a host of other report and accounting packages.

Along with multi-level security, ScanNet records specific user actions to provide security/or administration log reports.



ScanNet now incorporates Central Credit Card Processing.

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